

Intellectual Property Office of New Zealand  
IP Summary Report

Page 1 of 1  
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(51) Classification: E04C3/292	Status. 70 Accepted	Version number. 10 IP type: Patent Non-Convention Complete (47) NZ Publication date: 25 May 2001
	Client Ref Smart Beam	
(22) NZ Filing date: 11 February 2000 (71) Applicant. RICHARD HENRY CODD, 47A Brooklyn Drive, Blenheim, New Zealand (72) Inventor Codd, Richard Henry Contact: Richard Henry Codd, 47A BROOKLYN DRIVE, BLENHEIM, New Zealand Journal 1463		Date actions completed: Start Opposition 25 May 2001 Application Accepted 26 April 2001 Filed 19 April 1999

Office title: Flat truss beams made up from metal diagonals and timber top and bottom cords

(54) Applicant title: (Smart) Beam

(57) Abstract:

Patent 335254

Described is a light strong prefabricated beam that can be easily assembled and dismantled without the need for mounting brackets. The beam has one or more timber chords and a number of tubular metal diagonals connecting them. Each of the diagonal supports has a flattened end which joins to the chords by a metal pin. The metal pin passes through an arc-shaped trench in the chord.

Drawing

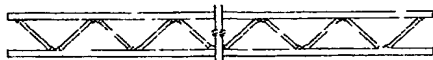


FIGURE 8  
ELEVATION

\*\* End of report \*\*

## NEW ZEALAND

## Patents Form

No. 5

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**PATENTS ACT 1953**  
**COMPLETE SPECIFICATION**  
 (To be furnished in Duplicate)

Where priority as provided by subsection (2) or (3) of section 11 of the Patents Act 1953 is desired in respect of one or more provisional specifications, quote number or numbers and date or dates

No \_\_\_\_\_

Date \_\_\_\_\_

(a) Insert title of Invention

(a) (SMART) BEAM

(b) State (in full) name, address and nationality of applicant or applicants as in application form

(b) CODD, RICHARD HENRYNew Zealander47A Brooklyn DriveBlenheim

(c) Here begin full description of invention. The continuation of the specification should be upon paper of the same size as this form, on one side only with the lines well spaced and with a margin of 2.5cm on the left hand side of the paper. The completion of the description should be followed by the words "What I (or we) claim is" after which should be written the claim or claims numbered consecutively (see note below). The specification and the duplicate thereof must be signed at the end

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HEREBY declare the invention, for which I/we pray that a patent may be granted to me/us and the method by which it is to be performed, to be particularly described in and by the following statement:

(c) See attached pages 1a & 2

NOTE. The claims must relate to a single invention, must be clear and succinct, and must be fairly based on the matter disclosed in the specification. They should form in brief a clear statement of that which constitutes the invention. Applicants should be careful that their claims include neither more nor less than they desire to protect by their patent. Any unnecessary multiplicity of claims or prolixity of language should be avoided.

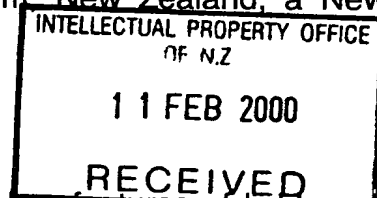
Claims should not be made for the efficiency or advantages of the invention.

## COMPLETE SPECIFICATION

(a) EASY TO ASSEMBLE TIMBER AND METAL BEAM  
(Previously referred to as The Smart Beam)

(b) I, RICHARD HENRY CODD, of 47A Brooklyn Drive, Blenheim, New Zealand, a New Zealand citizen,

HEREBY declare the invention.....  
..... in and by the following statement:



(c) This invention is a simply constructed beam that combines the key features of lightness, strength and portability. The timber and metal components can be easily carried in an unassembled form to remote areas where they can be assembled on site to construct strong and durable beams for walkways or footbridges.

Other applications for this invention would be for strong light portal frames, floor and ceiling joists, lintels and anywhere else a beam may be needed within buildings or other constructions.

The specific size of components can vary according to purpose and / or distributed or point loading requirements but the unique feature of this invention is the way in which the timber and metal components are joined. The simplicity of the join obviates any need for welding or bolts. Once the components have been produced, the beam itself can be assembled on-site with unskilled labour. For example, a farmer could purchase the components and assemble a footbridge at a remote location without requiring any expert assistance or advice. Likewise, Conservation Department staff could carry the

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components to relatively inaccessible sites in national parks and easily assemble strong durable beams to underpin walkways or footbridges

All completed easy-to-assemble beams shall comply with the appropriate New Zealand Standards for their particular application.

An illustration of the invention will now be presented with reference to the accompanying drawings of which:

Figure 1 shows a plan and elevation of the connection between the metal diagonals and the top and bottom timber chords.

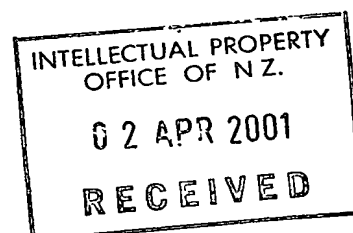
Figure 2 shows an elevation of an assembled beam

The basic design (Figure 2) is that of a Warren Truss. Each diagonal component of the truss (1) is a piece of tubular metal (aluminium or steel) that has been flattened and drilled at each end (2) to fit the top and bottom chords. An arc-shaped trench (3) is cut into the chords at specified distances apart to accommodate the joined diagonals. The join itself is held together by a metal pin passing through a pre-drilled hole (4) in the chords and flattened ends of the diagonals.

#### WHAT I CLAIM IS:

1. A light strong prefabricated beam that can be easily assembled and dismantled without requiring mounting brackets and which comprises a plurality of timber chords and a plurality of tubular metal diagonals connecting them and wherein each tubular metal diagonal has a flattened end that joins to the chords by a metal pin that passes through an arc-shaped trench in the chord.
2. A beam as claimed in claim 1 which can be assembled at its site of application and placed on horizontally spaced bearing supports without the need for welding or bolting
3. A beam substantially as herein described and as illustrated in the accompanying drawings.

*P. H. Good*



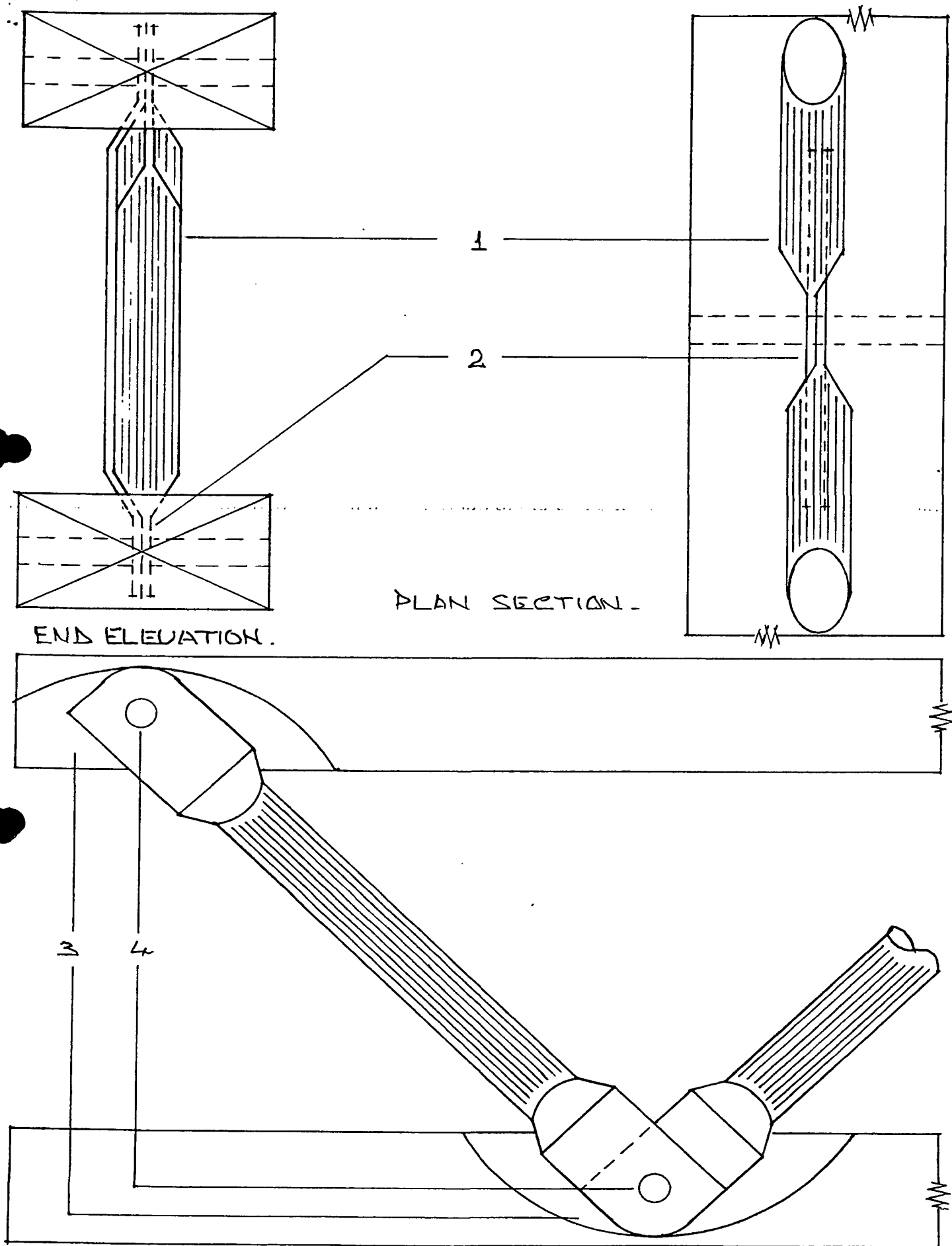
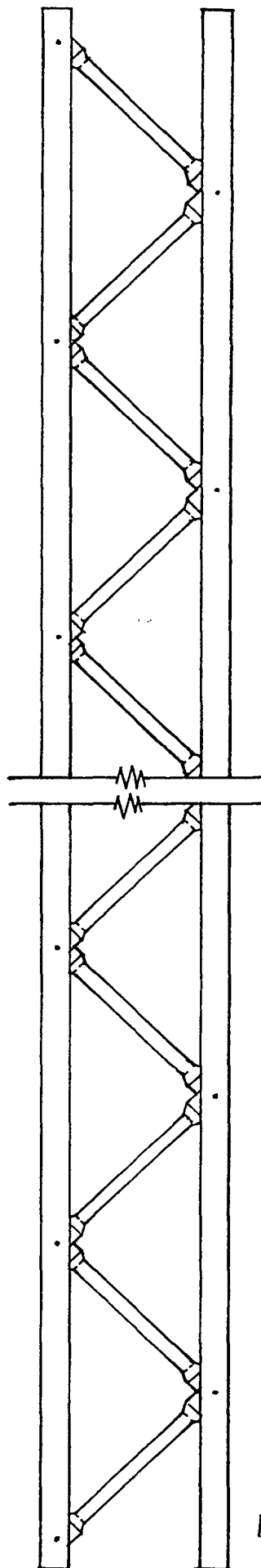


FIGURE 1 ELEVATION SECTION. Mr. D.H. COND. P. K. Bodd



Mu.R.H. COND. of a road

FIGURE 2. ELEVATION -